

DETAIL WATERTIGHT CONNECTIONS

INTEGRALLY CAST
SLEEVE SEAL
(LOCK JOINT OR EQUAL)

EXTERNAL STAINLESS STEEL
TAKE UP CLAMPS

CORED SLEEVE SEAL
(KOR-N-SEAL OR EQUAL)

INTEGRALLY CAST
GASKET
(A-LOCK OR EQUAL)

INTERNAL EXPANDING
LOCKING BAND (NON-
MAGNETIC STAINLESS
STEEL)

SEE DETAIL OF REQUIRED
WATERTIGHT CONNECTIONS

PIPE SHALL REST ON
UNDISTURBED EARTH
AND NOT BEAR
DIRECTLY ON MANHOLE

SHIM CASTING TO
MATCH GRADE 1/2" MIN.
MORTAR THICKNESS

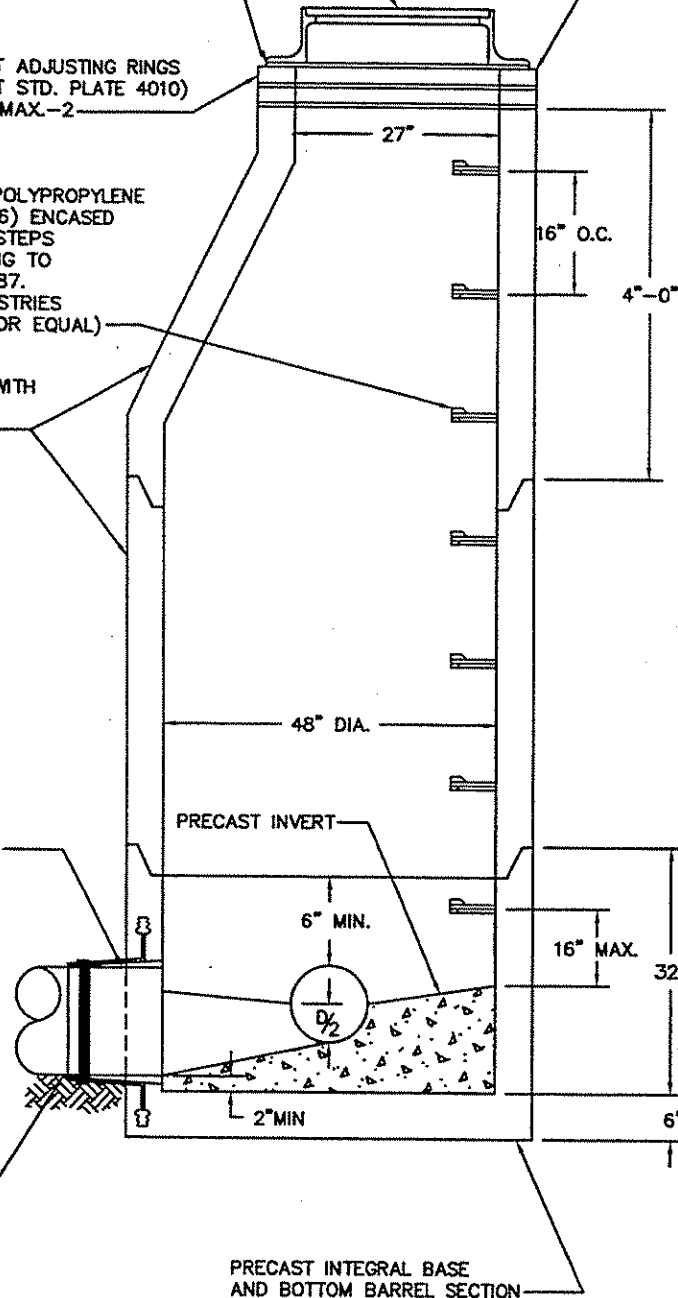
PRECAST ADJUSTING RINGS
(MN/DOT STD. PLATE 4010)
MIN.-1, MAX.-2

12" WIDE POLYPROPYLENE
(ASTM 2146) ENCASED
MANHOLE STEPS
CONFORMING TO
ASTM C-487.
(M.A. INDUSTRIES
PS-I-PF, OR EQUAL)

ECCENTRIC CONE WITH
PRECAST RISER
SECTIONS AS REQ.

CASTINGS A & B
STD. PLATES
2201D & 2202C

SET RINGS IN FULLY MORTARED
3/8" BED. PLASTER EXTERIOR
WITH 1/2" MORTAR, DO NOT
PLASTER INTERIOR.



NOTES:

1. FOR CONSTRUCTION OF NEW
SANITARY SEWER UP TO 18" I.D.
2. PRECAST RISER SECTIONS TO
MEET ASTM C-478
3. JOINTS BETWEEN PRECAST SECTIONS
SHALL USE O-RING RUBBER GASKET
CONFORMING TO ASTM C-443
4. WATERTIGHT PIPE CONNECTIONS
SHALL MEET ASTM C-923 &
C-443 AND ALLOW FOR
10" DEFLECTION IN ANY DIRECTION.

I hereby certify that this plan, specification or
report was prepared by me or under my direct
supervision and that I am a duly Licensed
Professional Engineer under the laws of the
State of Minnesota

Joseph A. Mueller
JOSEPH A. MUELLER
Date 9-2-02 Lic. No. 93942

APPROVED

CITY ENGINEER

CITY OF ST. PAUL
DEPARTMENT OF PUBLIC WORKS

MANHOLE, DESIGN TYPE I

Date of
Revision

JULY
2002

Standard
Plate
No.

2101C